



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,628	04/03/2001	Ran Oz	5079P006	3840
26263	7590	12/28/2006	EXAMINER	
SONNENSCHEIN NATH & ROSENTHAL LLP			JUNTIMA, NITTAYA	
P.O. BOX 061080			ART UNIT	PAPER NUMBER
WACKER DRIVE STATION, SEARS TOWER			2616	
CHICAGO, IL 60606-1080				
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/28/2006	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	09/825,628	OZ ET AL.
	Examiner	Art Unit
	Nittaya Juntima	2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 October 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-6, 9, 11-19, 26, 29, 35, 38-64 and 67-73 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 18 is/are allowed.
- 6) Claim(s) 1-6, 9, 11-17, 19, 26, 29, 35, 38-64 and 67-73 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 04 May 2005 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment filed on 10/19/2006.
2. The objections to the claims are withdrawn in view of applicant's amendment.
3. Claims 7-8, 10, 20-25, 27-28, 30-34, 36-37, and 66 were cancelled.
4. Claim 18 is allowed.
5. Claims 26, 57, and 59 are presently rejected under 35 U.S.C. 112, second paragraph
6. Claims 2-3, 9, 12-13, 26, 29, 38-40, 43-45, 49-51, 54-56, and 58 are currently rejected under 102 (e).
7. Claims 1, 4-6, 11, 14-17, 19, 35, 41-42, 46-48, 52-53, 57, 59-65, and 67-73 are currently rejected under 103 (a).

Claim Objections

8. Claim 60 is objected to because of the following informalities:
 - in claim 60, line 4, "a bit converter" should be changed to "a bit rate converter," see line 9 of the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2616

10. Claims 26, 57, and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 26, in line 13, the limitation "each bit rate converted sequence of media signals" is vague and indefinite. It cannot be determined how each of one sequence of media signals can be converted. The Office is interpreting the limitation as "each of the bit rate converted media signals."

In claim 26, lines 15-16, the limitation "the at least two sequences" lacks antecedent basis. The Office is treating the limitation as "the at least two media signals."

In claim 26, line 16, the limitation "the channel" is vague and indefinite. It is unclear as to which channel (i.e., the channel in line 3 or the channel in line 6) the claim is referring. The Office is interpreting the limitation as "the channel having the available bandwidth."

In claim 26, lines 18-19, the limitation "the at least two sequences of media signals" lacks antecedent basis. The Office is treating the limitation as "the at least two media signals."

In claim 26, lines 16-17, the limitation "converting the media signals in view of the selection" is vague and indefinite. It cannot be determined from the claim language as how the at least two media signals of the sequence as recited in line 11 of the claim can be converted in view of the selection if only one of the at least two media signals is selected in the step of selecting. The Office is treating the limitation as "converting the at least one of the at least two media signals in view of the selection."

In claim 57, line 2, the limitation "the sequence of media signals" lacks antecedent basis. The Office is treating the limitation as "the stream of media signals."

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 2-3, 9, 12-13, 26, 29, 38-40, 43-45, 49-51, 54-56, and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhang et al. ("Zhang") (US 6,795,506 B1).

Regarding claim 2, as shown in Fig. 2, Zhang teaches a method for generating and transmitting bit rate conversion information, the method comprising:

Receiving a sequence of media signals (uncompressed bitstream comprising video program V1), the sequence of media signals to be transmitted over a communication channel (a medium 70) (col. 8, lines 43-45, 54-62).

Applying at least two bit rate conversion schemes on the sequence of media signals (col. 8, lines 45-51 and col. 14, lines 34-42, 54-col. 15, lines 1-16).

Analyzing the results of the appliance of the at least two bit rate conversion schemes to provide bit rate conversion information (the results of encoding must be analyzed in order for the coding statistics information describing coding conditions of the video data for V1 to be provided, col. 8, lines 45-51 and col. 14, lines 34-42, 54-col. 15, lines 1-16).

Transmitting at least a portion of the bit rate conversion information over the communication channel along with the sequence of media signals (a portion of the coding

statistics information along with the video data for V1 is transmitted in a multiplexed compressed bit stream, col. 8, lines 47-62).

Regarding claim 3, Zhang teaches that the step of transmitting at least a portion of the bit rate conversion information is preceded by a step of multiplexing at least a portion of the bit rate conversion information with the sequence of media signals (col. 8, lines 51-54).

Regarding claim 9, as shown in Fig. 3A, Zhang further teaches that the media signals are signals representative of visual and audio information.

Claims 12 and 13 are method claims containing similar limitations as method claims 2 and 3, respectively, and are therefore rejected under the same season set forth in the rejection of claims 2 and 3, respectively.

Regarding claim 26, as shown in Fig. 2, Zhang teaches a method for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel, the method comprising the steps of:

Receiving, at a headend (a network device 92), the sequence of media signals (the compressed multiplex bitstream received from network device 58), bandwidth information (bandwidth information of a channel between network 92 and decoder 52 must be received in order for the network device 92 to transmit the video program to decoder 52) and bit rate conversion information (coding statistics information generated by network device 58), wherein the media signals and the bit rate conversion information are received over a communication channel (a channel between network devices 58 and 92) from a distribution center (network device 58). See col. 8, lines 43-62, col. 9, lines 51-61, and col. 10, lines 28-30).

Determining whether to convert the bit rate of the sequence of media signals in view of bandwidth information and the bit rate conversion information (col. 10, lines 28-30).

Converting the bit rate of the sequence of media signals in response to the determination (col. 10, lines 28-30).

Wherein the sequence of media signals comprising at least two media signals (V1 and V2), each of the at least two media signals associated with bit rate conversion information (col. 8, lines 43-56).

Wherein each of the at least two bit rate converted media signals is representative of at least a portion of a program (col. 8, lines 43-56, col. 9, lines 25-36, and col. 10, lines 28-32).

Selecting at least one of the at least two media signals to be provided to the channel having the available bandwidth (a channel connecting network device 92 to decoder 52) and wherein converting the at least one of the at least two media signals in view of the selection (col. 10, lines 28-46).

Wherein the step of receiving is preceded by a step of multiplexing the at least two media signals (col. 8, lines 43-56).

Wherein the step of multiplexing is preceded by a step of generating bit rate conversion information (col. 8, lines 43-56).

Claim 29 contains limitations similar to that of claim 26 and is rejected under the same reason set forth in the rejection of claim 26 with the addition that the bit rate conversion information is generated by a central analyzer (encoders 64a and 64b, collectively) at a distribution center (network device 58) and multiplexed with the media signals at the distribution center (col. 8, lines 43-56, col. 9, lines 25-36, and col. 12, lines 28-31, 47-49).

Regarding claim 38, as shown in Fig. 2, Zhang teach an apparatus for generating and transmitting bit rate conversion information from a distribution center (network device 58) to a headend (network device 92), the apparatus comprising:

At least one bit rate converter (encoder 64a) for receiving a sequence of media signals (V1) to be transmitted to the headend (network device 92) over a communication channel (a channel between devices 58 and 92), and for applying at least one bit rate conversion scheme on the sequence of media signals to provide a bit rate converted sequence of media signals (col. 8, lines 43-56, col. 9, lines 25-36, and col. 12, lines 28-40 and 47-54, and Fig. 3A, col. 14, lines 34-44).

At least one bit rate conversion analyzer (processing apparatus 253 in Fig. 3A), coupled to the at least one bit rate converter, for received and analyzing the bit rate converted sequence of media signals and providing bit rate conversion information (the processing apparatus 253 collects and outputs the bit rate information 262, col. 12, lines 28-40 and 47-54).

Regarding claim 39, Zhang further teaches a transmitter (68 in Fig. 2), coupled between the at least one bit rate conversion analyzer and the communication channel, for receiving and transmitting over the communication channel at least a portion of the bit rate conversion information (col. 8, lines 51-56 and col. 9, lines 25-27).

Regarding claim 40, Zhang further teaches a multiplexer (the scheduler 66) that receives and multiplexes the sequence of media signals and at least a portion of the bit rate conversion information (col. 8, lines 56-56).

Regarding claim 43, Zhang teaches that the bit rate conversion schemes are selected from removing filler packets, removing filler frames, and removing stuffing bits (removing redundant information inherent in video sequences, col. 14, lines 34-44).

Regarding claim 44, it is inherent that at least one pair of bit rate converter (252 in Fig. 3A) and bit rate conversion analyzer (253 in Fig. 3A) apply a sequence of bit rate conversion schemes on a sequence of media signals and provide bit rate conversion information indicative of results of an appliance of a sequence of bit rate conversion schemes on the at least one media stream since multiple compression algorithms are applied in order to generate the bit rate conversion information, which comprises the coding statistics information including parameters (col. 12, lines 28-40 and 47-54, and col. 14, lines 34-col. 15, lines 1-16).

Regarding claim 45, as shown in Fig. 3A, Zhang further teaches that the media signals are signals representative of visual and audio information.

Claims 49-51, and 54-56 are apparatus claims containing limitations similar to claims 38-40, and 43-45, respectively, (at least one stream of media signals reads on bitstream V1 in Fig. 2, col. 8, lines 43-51) and are therefore rejected under the same reason set forth in the rejection of claims 38-40, and 43-45, respectively.

Regarding claim 58, it is inherent that the apparatus (network device 58 in Fig. 2) must be located within a central distribution center.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2616

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1, 6, 11, 16, 17, 19, 46-48, 57, 59, 60-65, and 67-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. ("Zhang") (US 6,795,506 B1) in view of Worthington et al. ("Worthington") (USPN 6,937,323 B2).

Regarding claim 1, as shown in Fig. 2, Zhang teaches a method for generating and transmitting bit rate conversion information, the method comprising:

Receiving a sequence of media signals (uncompressed bitstream comprising video program V1), the sequence of media signals to be transmitted over a communication channel (a medium 70) (col. 8, lines 43-45, 54-62).

Applying at least two bit rate conversion schemes on the sequence of media signals (col. 8, lines 45-51 and col. 14, lines 34-42, 54-col. 15, lines 1-16).

Analyzing the results of the appliance of the at least two bit rate conversion schemes to provide bit rate conversion information (the results of encoding must be analyzed in order for the coding statistics information describing coding conditions of the video data for V1 to be provided, col. 8, lines 45-51 and col. 14, lines 34-42, 54-col. 15, lines 1-16).

Although Zhang further teaches that the bit rate conversion is to be sent to a single controller (network device 92) that determines whether to apply bit rate conversion schemes in response to bit rate conversion information (col. 10, lines 28-32), Zhang does not explicitly teach multiple controllers as recited in the claim.

However, in analogous art shown in Fig. 1, Worthington teaches a distributing system for distributing information from a central source to multiple receivers, wherein the system includes

Art Unit: 2616

a computer 106 and a central data repository server 110 (collectively, equivalent to a central analyzer) sending test results (equivalent to the bit rate information) to multiple terminal 112s (equivalent to multiple controllers). See col. 4, lines 28-33.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Zhang by applying Worthington's concept of a distributing information from a central source to multiple receivers such that the bit rate information would be sent to multiple controllers that determine whether to apply bit rate conversion schemes in response to bit rate conversion information as recited in the claim. The suggestion/motivation to do so would have been to analyze data at a central processing unit and distribute the analysis to the multiple remote receivers as taught by Worthington (lines 8-10 of the Abstract).

Regarding claim 6, Zhang teaches that the bit rate conversion schemes are selected from removing filler packets, removing filler frames, and removing stuffing bits (removing redundant information inherent in video sequences, col. 14, lines 34-44).

Claims 11 and 16 are method claims containing similar limitations as method claims 1 and 6, respectively, and are therefore rejected under the same season set forth in the rejection of claims 1 and 6, respectively.

Regarding claim 17, it is inherent that the steps of applying and analyzing are repeated to produce bit rate conversion information indicative of results of an appliance of a sequence of bit rate conversion schemes on the at least one media stream since multiple compression algorithms are applied in order to generate the bit rate conversion information, which comprises the coding statistics information including parameters (col. 14, lines 34-col. 15, lines 1-16).

Art Unit: 2616

Regarding claim 19, as shown in Fig. 3A, Zhang further teaches that the media signals are signals representative of visual and audio information.

Regarding claims 46 and 48, although Zhang teaches transmitting the bit rate conversion information and the sequence of media signals to a receiver (network device 92 in Fig. 2), Zhang does not explicitly teach multiple controllers as recited in the claim.

However, in analogous art shown in Fig. 1, Worthington teaches a distributing system for distributing information from a central source to multiple receivers, wherein the system includes a computer 106 and a central data repository server 110 (collectively, equivalent to the apparatus) sending test results (equivalent to the bit rate information and the sequence of media signals, collectively) to multiple terminal 112s (equivalent to multiple receivers which are local distribution centers). See col. 4, lines 28-33.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Zhang by applying Worthington's concept of a distributing information from a central source to multiple receivers such that the bit rate information and the sequence of media signals would be sent to multiple receivers as recited in the claim. The suggestion/motivation to do so would have been to distribute data from a central processing unit to the multiple remote receivers as taught by Worthington (lines 8-10 of the Abstract).

Regarding claim 47, it is inherent that the apparatus (network device 58 in Fig. 2) is located within a central distribution center.

Claims 57 and 59 are apparatus claims containing limitations similar to claims 46 and 47, respectively, (at least one stream of media signals reads on bitstream V1 in Fig. 2, col. 8, lines

43-51) and are therefore rejected under the same reason set forth in the rejection of claims 46 and 47, respectively.

Regarding claim 60, as shown in Fig. 5A, Zhang teaches an apparatus for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel (a channel connecting network device 92 to one of the decoders 52-56 in Fig. 2), the apparatus comprising:

A controller (409), coupled to a bit rate converter (406), for receiving bit rate conversion information and bandwidth information (bandwidth information of a channel between network 92 and decoder 52 must be received in order for the rate controller 409 to determine whether to apply bit rate conversion to a particular compressed bitstream) and for determining whether to convert the bit rate of the sequence of media signals (a compressed bitstream) in response to the bandwidth information and the bit rate conversion information; wherein the bit rate conversion information is provided from a central analyzer (network device 58 in Fig. 2). See col. 8, lines 43-56, and col. 21, lines 52-62).

The bit rate converter (406), coupled to the controller (409), for receiving the sequence of media signals, and for converting the bit rate of the sequence of media signals, in response to the determination (col. 21, lines 52-62).

Although Zhang further teaches that the bit rate conversion is to be sent to a single controller (rate controller 409 in Fig. 5A of the network device 92 in Fig. 2), Zhang does not explicitly teach multiple controllers as recited in the claim.

However, in analogous art shown in Fig. 1, Worthington teaches a distributing system for distributing information from a central source to multiple receivers, wherein the system includes

a computer 106 and a central data repository server 110 (collectively, equivalent to a central analyzer) sending test results (equivalent to the bit rate information) to multiple terminal 112s (equivalent to multiple controllers). See col. 4, lines 28-33.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Zhang by applying Worthington's concept of a distributing information from a central source to multiple receivers such that the bit rate information would be sent to multiple controllers as recited in the claim. The suggestion/motivation to do so would have been to analyze data at a central processing unit and distribute the analysis to the multiple remote receivers as taught by Worthington (lines 8-10 of the Abstract).

Regarding claim 61, as shown in Fig. 2, Zhang teaches that the sequence of media signals comprising at least two media signals (V1 and V2), each of the at least two media signals associated with bit rate conversion information (col. 8, lines 43-56).

Regarding claim 62, Zhang teaches that each of the at least two bit rate sequences of media signals is representative of at least a portion of a program (col. 8, lines 43-56, col. 9, lines 25-36, and col. 10, lines 28-32).

Regarding claim 63, Zhang teaches that the apparatus (network device 92 in Fig. 2) selects at least one of the at least two sequences to be provided to the channel (a channel connecting network device 92 to one of the decoders 52-56 in Fig. 2) (col. 10, lines 28-46).

Regarding claim 64, as shown in Fig. 5A, Zhang further teaches multiplexer (scheduler 411), coupled between the communication channel (a channel connecting network device 92 to one of the decoders 52-56 in Fig. 2) and the bit rate converter (406), for multiplexing the at least two sequences of media signals (col. 21, lines 52-62).

Regarding claim 65, Zhang teaches that the bit rate conversion schemes are selected from removing filler packets, removing filler frames, and removing stuffing bits (removing redundant information inherent in video sequences, col. 14, lines 34-44).

Regarding claim 67, Zhang teaches that the bit rate conversion information is multiplexed with the media signals (col. 8, lines 47-56).

Regarding claim 68, the combined teaching of the Zhang and Worthington does not teach that the media signals are associated with priority criteria, and that the step of converting the media signals is further based upon a priority associated with the media signals.

However, an official notice is taken that it is well known in the art that there are different levels of quality associated with media signals, and these quality levels usually relate to different priority levels which need to be maintained by a network operator for customer satisfaction. Therefore, it would have been obvious to one skilled in the art to include that the media are associated with priority criteria, and that the step of converting the media signals is further based upon a priority associated with the media signals in order to maintain a certain signal quality to ensure customer satisfaction.

Regarding claims 69 and 70, Zhang teaches that the media signals are MPEG compliant signals and arranged in MPEG compliant transport packets (col. 12, lines 28-40 and col. 15, lines 45-49).

15. Claims 4-5, 14-15, 41-42, and 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. ("Zhang") (US 6,795,506 B1) in view of the admitted prior art.

Regarding claims 4 and 41, Zhang teaches that the bit rate conversion information indicates (a) the at least two bit rate conversion schemes applied on the sequence of media signals (col. 8, lines 51-54 and col. 14, lines 34-42, 54-col. 15, lines 1-16). Although Zhang teaches that a receiver of the bit rate conversion information such as a network device 92 uses the information to convert the bit rate of the compressed bitstream to help the multiplexed bitstream fit within the allowable bandwidth between the network device 92 and a decoder 52 (col. 10, lines 28-32), Zhang does not explicitly teach that the information also includes (b) at least two amounts of bit rate conversion resulting from the appliance of the at least two bit rate conversion schemes.

In an analogous structure shown in Fig. 1 in which a unit receiving bit rate conversion information, such as controller, also uses the information to enable media transmission over an available bandwidth of a downstream channel, the admitted prior art teaches that bit rate conversion information to be transmitted to, also includes at least two amounts of bit rate conversion resulting from the appliance of the at least two bit rate conversion schemes (the at least two amounts read on information that reflects the amount of actual bit rate conversion that can be achieved by applying bit rate conversion techniques, paragraph 0013).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the teaching of Zhang to include at least two amounts of bit rate conversion resulting from the appliance of the at least two bit rate conversion schemes in the bit rate conversion information in order to notify a receiver of the bit rate conversion information of at least two bit rate conversion amounts that are achieved by applying at least two bit rate conversion schemes.

Regarding claims 5 and 42, Zhang teaches that the bit rate conversion information further indicates at least one quality loss resulting from the appliance of the at least two bit rate conversion schemes (col. 14, lines 34-57).

Claims 14 and 15 are method claims containing similar limitations as method claims 4 and 5, respectively, and are therefore rejected under the same reason set forth in the rejection of claims 4 and 5, respectively.

Claims 52 and 53 are apparatus claims containing limitations similar to claims 41 and 42, respectively, (at least one stream of media signals reads on bitstream V1 in Fig. 2, col. 8, lines 43-51) and are therefore rejected under the same reason set forth in the rejection of claims 41 and 42, respectively.

16. Claims 35 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al. ("Zhang") (US 6,795,506 B1).

Claim 35 contains limitations similar to that of claim 26 is rejected under the same reason set forth in the rejection of claim 26 with the addition that the media signals are MPEG compliant signals and arranged in MPEG compliant transport packets (col. 12, lines 28-40 and col. 15, lines 45-49). Zhang further teaches that the bit rate conversion information is embedded within the transport packets at a distribution center (transport stream 326 in Fig. 4A must include transport packets, col. 8, lines 45-56 and col. 15, lines 45-49), however, Zhang does not teach that the bit rate conversion is embedded within the headers of the transport packets.

An official notice is taken that it is well known in the art to embed any information related to payload processing, such as control information, within the header of a packet to assist

Art Unit: 2616

a receiving party in processing the packet payload. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Zhang such that the bit rate conversion information would be embedded within the header of the transport packets as recited in the claim. The suggestion/motivation to do so would have been to transmit the bit rate conversion information to a receiving party in order to assist in processing, i.e. decompressing, the packet payload, and such modification involves only routine skill in the art.

Claim 71 is an apparatus claim corresponding to method claim 35 and is rejected under the same reason set forth in the rejection of claim 35 with the addition of a controller (rate controller 409 in Fig. 5A; col. 21, lines 52-62) and a bit rate controller (bit rate controller 406 in Fig. 5A, col. 21, lines 52-62).

17. Claims 72 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang (US 6,795,506 B1) in view of an art of record, Linzer et al. ("Linzer") (USPN 6,038,256).

Regarding claim 72, as shown in Fig. 5A, Zhang teaches an apparatus for modifying a bit rate of a sequence of media signals such that the bit rate of the sequence of media signals does not exceed an available bandwidth of a communication channel (a channel connecting network device 92 to one of the decoders 52-56 in Fig. 2), the apparatus comprising:

A controller (409), coupled to a bit rate converter (406), for receiving bit rate conversion information and bandwidth information (bandwidth information of a channel between network 92 and decoder 52 must be received in order for the rate controller 409 to determine whether to apply bit rate conversion to a particular compressed bitstream) and for determining whether to convert the bit rate of the sequence of media signals (a compressed bitstream) in response to the

Art Unit: 2616

bandwidth information and the bit rate conversion information; wherein the bit rate conversion information is provided from a central analyzer (network device 58 in Fig. 2). See col. 8, lines 43-56, and col. 21, lines 52-62).

The bit rate converter (406), coupled to the controller (409), for receiving the sequence of media signals, and for converting the bit rate of the sequence of media signals, in response to the determination (col. 21, lines 52-62).

However, Zhang does not teach the apparatus modifies bit rate conversion information to reflect bit rate conversion schemes that were applied by the bit rate converter.

Linzer, as shown in Fig. 6, teaches that an apparatus (a statistical multplexer 70) that modifies statistics as a posteriori statistics (equivalent to bit rate conversion information) to reflect the complexity involved in re-encoding the reproduced video signals at respective transcoders (equivalent to bit rate conversion schemes that were applied by a converter) (col. 9, lines 6-28).

Given the teaching of Linzer, it would have been obvious to one skilled in the art at the time the invention was made to modify the teaching of Zhang to incorporate the teaching of Linzer such that the apparatus would modify bit rate conversion information to reflect bit rate conversion schemes that were applied by the bit rate converter. The suggestion/motivation to do so would have been to enable the apparatus to utilize both the a priori and a posteriori statistics (equivalent to original bit rate information and modified bit rate information, respectively) in transporting combined re-compressed video bit streams (equivalent to the media signals with modified bit rate) as taught by Linzer (col. 9, lines 23-28).

Regarding claim 73, Zhang further teaches that the bit rate conversion information being indicative of results of an appliances of sequence of bit rate conversion schemes on the sequence of media signals (col. 8, lines 45-56, col. 9, lines 25-27, and col. 14, lines 34-46).

Response to Arguments

18. Applicant's arguments with respect to claims 1-6,9,11-17,19,26,29,35,38-64, and 67-73 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated

Art Unit: 2616

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nittaya Juntima

December 26, 2006

NS



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600